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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/578,779	05/09/2006	Jacques Leclercq	289274US6PCT	6166
22850	7590	09/04/2008	EXAMINER	
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			SZEWCZYK, CYNTHIA	
			ART UNIT	PAPER NUMBER
			1791	
			NOTIFICATION DATE	DELIVERY MODE
			09/04/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/578,779	Applicant(s) LECLERCQ ET AL.	
	Examiner CYNTHIA SZEWCZYK	Art Unit 1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 May 2006 and 30 May 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 29-56 is/are pending in the application.
- 4a) Of the above claim(s) 46-55 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 29-45 and 56 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 May 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>5/9/06, 7/28/06, 8/3/06</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This is the initial office action for LECLERCQ et al. application no. 10/578,779 filed May 9, 2006.

Election/Restrictions

2. Restriction was inadvertently required under 35 USC 121. The following sets forth the proper standard for restriction in a National Stage of a PCT application filed under 35 U.S.C. §371.

3. Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group 1, claim(s) 29-45 and 56, drawn to a method of manufacturing bent glass.

Group 2, claim(s) 46-55, drawn to apparatus for bending glass.

4. The inventions listed as Groups 1 and 2 do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: NEDELEC et al. (US 4,292,065) discloses the special technical feature of a circular arc of more than 90° (col. 7, lines 21-27). Therefore, the two groups lack unity of invention.

5. Claims 46-44 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected group, there being no allowable

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generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on May 30, 2008.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 29-32, 36, 38, and 42 are rejected under 35 U.S.C. 102(b) as being anticipated by NEDELEC et al. (US 4,292,065).

NEDELEC teaches a method for shaping thermoplastic sheet material wherein the glass is first heated to its softening temperature and then caused to travel over a shaping bed that imparts a transverse and longitudinal curvature (abstract) as in instant claim 29. Figure 1 shows that the shaping bed moves in an arc-shaped profile. NEDELEC discloses that the glass sheet is then tempered after shaping (abstract). NEDELEC discloses an embodiment in which the shaping bed comprises a full half circle and the glass is released to a horizontal conveyer below the infeed (col. 7, lines 21-27) as in instant claim 29.

Figure 1 shows that the glass sheets are brought horizontally to the shaping bed as in instant claim 30. NEDELEC discloses that the glass sheets travel on a horizontal conveyer leaving the shaping bed (col. 7, lines 21-27) as in instant claim 30.

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Figure 1 shows that the glass sheets first travel along a flat trajectory before entering the curved shaping bed as in instant claim 31. NEDELEC discloses that the curved shaping bed is tangential to the heating zone (col. 2, lines 32-38).

NEDELEC discloses that it is known in the art that glass may be sagged by gravity after being brought to its softening point (col. 1, lines 45-47) as in instant claim 32.

Figure 1 shows that the glass travels along a descending path as in instant claim 36. NEDELEC discloses that the glass sheets travel on a horizontal conveyer upon leaving the shaping bed (col. 7, lines 21-27) as in instant claim 36.

Figures 5 and 6 show that the apparatus of NEDELEC uses waisted/barreled rods as in instant claim 38.

NEDELEC discloses that air is blown across the glass sheets during the shaping bed (col. 7, lines 21-27) as in instant claim 42.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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9. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

10. Claim 56 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over NEDELEC et al. (US 4,292,065).

NEDELEC discloses that the method can be used to produce bent glass (col. 1, lines 6-8) as in instant claim 56.

11. Claims 33-35, 37, 39, and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over NEDELEC et al. (US 4,292,065).

NEDELEC teaches a method for shaping thermoplastic sheet material wherein the glass is first heated to its softening temperature and then caused to travel over a shaping bed that imparts a transverse and longitudinal curvature (abstract). NEDELEC discloses an embodiment in which the shaping bed comprises a full half circle and the glass is released to a horizontal conveyer below the infeed (col. 7, lines 21-27).

It would have been obvious that causing the glass sheets to travel along an ascending path as in instant claim 33 would have been a simple reversal of

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parts. In re Gazda, 219 F.2d 449, 104 USPQ 400 (CCPA 1955) determined that the reversal of parts in an apparatus is an obvious expedient.

It would have been obvious that if the glass travels along a semi-circle shaping bed that the glass sheets would end up on its reverse side at the end of the shaping as in instant claims 34 and 35.

NEDELEC discloses that the glass sheets are passed by air blowing manifolds (col. 7, lines 21-24) which would cool the glass as in instant claim 37.

NEDELEC discloses that in the transverse and longitudinal directions the radius of curvature may range from infinite to less than 1 meter (col. 6, lines 25-28). A person of ordinary skill could have reached the ranges of instant claim 39 by optimization for intended purposes.

NEDELEC is silent as to the distance between the glass sheets but it would have been obvious to one having ordinary skill in the art to keep the glass sheets close in order to produce more bent glass sheets in a small amount of time. A person of ordinary skill in the art could have reached the range of instant claim 44 by optimizing the process.

12. Claims 40 is rejected under 35 U.S.C. 103(a) as being unpatentable over NEDELEC et al. (US 4,292,065) in view of GULOTTA (US 3,409,422).

NEDELEC teaches a method for shaping thermoplastic sheet material wherein the glass is first heated to its softening temperature and then caused to travel over a shaping bed that imparts a transverse and longitudinal curvature (abstract). NEDELEC discloses an embodiment in which the shaping bed

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comprises a full half circle and the glass is released to a horizontal conveyer below the infeed (col. 7, lines 21-27). NEDELEC is silent as to the temperature of the glass.

GULOTTA teaches a method and apparatus for forming compound bends in glass sheets. GULOTTA discloses that the glass sheets are at a temperature of 1200 °F, or 648.9 °C, (col. 8, lines 12-13) during the bending operation, which would fall into the range of instant claim 40. It would have been obvious to use the temperature of GULOTTA because NEDELEC references the GULOTTA patent in its specification as an apparatus known prior art for creating complex bends in glass(col. 1, lines 64-66). Therefore, the claimed invention would have been obvious.

13. Claims 41 and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over NEDELEC et al. (US 4,292,065) in view of JOHNSON (US 4,139,359).

NEDELEC teaches a method for shaping thermoplastic sheet material wherein the glass is first heated to its softening temperature and then caused to travel over a shaping bed that imparts a transverse and longitudinal curvature (abstract). NEDELEC discloses an embodiment in which the shaping bed comprises a full half circle and the glass is released to a horizontal conveyer below the infeed (col. 7, lines 21-27). NEDELEC is silent as to the thickness of the glass and air quench pressure.

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JOHNSON teaches a method and apparatus for shaping glass sheets by roll forming. JOHNSON teaches that the heat softened glass are shaped to compound bends by being continuously conveyed by means of forming rolls to a curved shaping bed similar to the method of NEDELEC. JOHNSON teaches that the glass sheets are quenched by air supplied to the top of the sheet at a pressure of 20 ounces per square inch and air supplied to the bottom of the sheet at a pressure of 5 ounces per square inch (col. 20, lines 30-35) which would create a total pressure of 25 ounces per square inch, or 1.08×10^4 Pa, which would fall within the range of instant claim 41.

JOHNSON discloses that a glass sheet having 5 mm, which would fall within the range of instant claim 43, and treated under the disclosed requirements would meet automotive code (col. 20, lines 53-55). It would have been obvious that the method of NEDELEC would use the conditions of JOHNSON because NEDELEC discloses that the bent glass sheets are used in the automotive market (col. 1, lines 61-63). Therefore, the claimed invention would have been obvious.

14. Claim 45 is rejected under 35 U.S.C. 103(a) as being unpatentable over NEDELEC et al. (US 4,292,065) in view of JOHNSON (US 4,123,246).

NEDELEC teaches a method for shaping thermoplastic sheet material wherein the glass is first heated to its softening temperature and then caused to travel over a shaping bed that imparts a transverse and longitudinal curvature (abstract). NEDELEC discloses an embodiment in which the shaping bed

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comprises a full half circle and the glass is released to a horizontal conveyer below the infeed (col. 7, lines 21-27). NEDELEC is silent as to the temperature of the glass.

JOHNSON teaches a method for shaping and quenching glass sheets by roll forming. JOHNSON discloses that it is preferable for the glass sheet to pass from the heating zone and leave the quenching zone in under 5 seconds (col. 2, lines 34-36). It would have been obvious that NEDELEC would use the same production rate because JOHNSON discloses that under those circumstances, thin glass sheets could be tempered without imparting high initial temperatures (col. 2, lines 36-39). Therefore, the claimed invention would have been obvious.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CYNTHIA SZEWCZYK whose telephone number is (571)270-5130. The examiner can normally be reached on Monday through Thursday 7:30 am to 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on (571) 272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Steven P. Griffin/
Supervisory Patent Examiner, Art
Unit 1791

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